

Applicant: Knopfle et al.
Serial No.: 10/759,458
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REMARKS

Certified Copy of the Priority Document

Applicant hereby submits with these Amendment papers, under a separate transmittal, a certified copy of the German priority application, DE 103 01 688.0, filed January 17, 2003.

Claims

Claims 1-18 are pending in the application with claims 1, 10, and 15 being independent. Claims 1, 10, 14, and 15 have been amended. Reconsideration is respectfully requested.

Claim Objections

Claim 10 stands objected to for the recitation of “the surface” in line 4 for lacking antecedent basis. Applicant has amended claim 10 to positively recite “a surface” and overcome this objection.

Claim Rejections – 35 U.S.C. §103(a)

Claims 1-11 and 15-18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hite (U.S. Pat. No. 3,230,628) in view of Cronk (U.S. Patent No. 1,860,174). Claims 12-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hite in view of Cronk and further in view of DiCarlo (U.S. Pat. No. 5,180,388). Applicant respectfully traverses the rejection to independent claim 1.

Claim 1 defines over the cited prior art or any combination thereof by reciting a measuring device for bone screw types of different shaft diameters. The measuring device comprises a surface with multiple receiving grooves for bone screws. Each receiving groove is associated with a limit stop to cooperate with a received bone screw. Each receiving groove is also associated with a length measuring scale for one or more of the different bone screw types. At least one of the receiving grooves and the associated limit stops have a selectivity with respect to the shaft diameter of the bone screws which can be received in the individual receiving grooves. With this selectivity, the measuring device of the present

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invention as set forth in claim 1 improves the reliability of measurements taken for bone screw types of different shaft diameters.

Hite discloses a measuring scale with a surface having a single receiving groove for measuring bone screws. As noted by the Examiner, Hite fails to disclose multiple receiving grooves for receiving bone screw types of different shaft diameters, as required by claim 1. Hite only provides a single receiving groove, which can result in errors when used to measure bone screw types of different shaft diameters. More specifically, as the transition from screw head to screw shaft varies, different bone screws will sit within the single receiving groove differently such that two bone screws of similar lengths will receive very different measurements. This principle is shown in the attached illustration marked as Exhibit 1. This is a blown-up view of Figure 1 from Hite. In this illustration, the ORANGE (O) and GREEN (G) bone screws have similar lengths, but the GREEN bone screw (G) measures 5/8 inches in length on the Hite scale, while the ORANGE bone screw (O) measures 3/4 inches in length on the Hite scale. The reason for the variation in measurements is the difference in shaft diameter. When placing bone screws in human bone, precise depth measurement can be critical and the present invention overcomes such variation in measurements by providing the selectivity with respect to the shaft diameter of bone screws which can be received in the individual grooves, as required by claim 1.

Cronk teaches multiple receiving notches for receiving rivets of varying shaft diameters. Cronk, however, fails to disclose a length measuring scale associated with any of the receiving notches, as required by claim 1. Instead, Cronk shows a common rivet number scale. In fact, in reviewing the common rivet number scale it becomes apparent that the common rivet number scale does not directly correlate to length in any manner. In one notch a common rivet number of 35 correlates to the same length of a common rivet number of 6 in an adjacent notch. The Examiner has combined the teaching of multiple receiving notches in Cronk with the teaching of a length measuring scale in Hite to arrive at the present invention as set forth in claim 1. Applicant respectfully submits that there is a lack of teaching, suggestion, or motivation in the references themselves for this combination. Applicant also respectfully submits that even if the combination were proper, the references, when combined, do not teach each and every limitation of claim 1.

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If Hite were to be modified by Cronk, as suggested by the Examiner, the intended operation of Hite would be ruined. Cronk requires the use of the rivet number scale to determine a rivet's proper designation, not length, while Hite, on the other hand, requires the use of the length measuring scale to determine a length of a bone screw. As a result, the Examiner's modification of Hite with Cronk is based on impermissible hindsight, not on motivation from the references themselves. In addition, claim 1 recites multiple receiving grooves with length measuring scales associated with each receiving groove. Neither Hite, nor Cronk, disclose a length measuring scale associated with each of multiple receiving grooves. Cronk's scales are merely common rivet number scales, not length measuring scales, as required by claim 1.

In summary, there is no teaching, suggestion, or motivation to combine the teachings of Cronk with Hite to arrive at the present invention as set forth in claim 1. In fact, this combination would ruin the intended operation of Hite. Furthermore, even when combined the references do not teach each and every limitation of claim 1. As a result, Applicant respectfully submits that claim 1 is in condition for allowance. In addition, Applicant respectfully submits that dependent claims 2-9 are also placed in condition for allowance based on their own merits and their dependency to claim 1, and the failure of the references to suggest claim 1.

Applicant respectfully submits that independent claims 10 and 15 are also in condition for allowance for the reasons cited above with respect to independent claim 1. Each of claims 10 and 15 also recite multiple receiving grooves and a length measuring scale associated with each of the receiving grooves. In addition, Applicant respectfully submits that dependent claims 11-14 and 16-18 are in condition for allowance based on their merits and their dependency to claims 10 and 15, and the failure of the references to suggest claims 10 and 15.

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Applicant believes the application is now in condition for allowance, which allowance is respectfully solicited. Applicant believes that no additional fees are required, except for the fees included in the attached check, if any. In any event, however, the Commissioner is authorized to charge our Deposit Account No. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,
HOWARD & HOWARD ATTORNEYS



February 22, 2005
Date

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CERTIFICATE OF EXPRESS MAILING

I hereby certify that this Amendment and Exhibit 1 are being deposited with the United States Postal Service as Express Mail, Label No. EV618893336US, postage prepaid, in an envelope addressed to the Mail Stop Amendment, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450, on February 22, 2005.

Sandra Barry

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